



## WHITE PAPER

# Improving the Services Experience by Injecting Network Intelligence Into the Model

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*Network-related professional services are poised to undergo a significant transformation driven by the complexity and demands of the business and technology environment. IDC sees a move from simple, reactive services to proactive, end-to-end services that leverage a vendor's intellectual capital.*

*This paper discusses the transformation within the services industry driven by embedded intelligence within networks and the devices themselves and how the use of automation combined with the significance of the data that is gleaned, analyzed, and utilized will impact the way suppliers and their partners deliver professional services and the way enterprises will consume services in the future.*

*This paper also explores the evolution of Cisco's Smart Services strategy, and how Cisco Services along with its channel partners are positioned to guide enterprise customers in their approach to consuming services in the future.*

## MARKET TRENDS

IDC believes there is a fundamental change taking place in the market for services opportunities related to designing, building, managing, and maintaining network-based infrastructures for both the service provider and enterprise markets. Key findings include:

- ☒ Network-related professional services are going through a massive realignment driven by the complexity and demands of the business and technology environment. This transformation will impact the way organizations buy services, but also the overall services market and models.
- ☒ This process is, at a high level, characterized by taking people-intensive processes and distance out of the services model and replacing these elements with software. Driving this transformation from simple, reactive services to proactive, predictive, and even pre-emptive end-to-end services is done by leveraging vendor intellectual capital (including databases of historical cases, live network probes, but also deep vertical domain knowledge), and maximizing the customer intimacy that partners provide, thereby allowing scarce resources to be redeployed in higher-value engagements.
- ☒ Although the rate of adoption will vary, we believe the CxO, ICT directors, and other buyers of (maintenance) services should understand that this new wave of services that leverages network intelligence will have a profound effect on the business and the interaction with vendors. This means that organizations will have to approach investments in equipment and services in a different light and look at the end-to-end *business* impact of the service experience.



- ☒ Partners will play an important role in the new services environment. On one level, they need to be as close as possible to the equipment vendors in order to leverage their intellectual capital and wrap their services around that. On another level, automation implicit in that will lead to freeing up the time of their own services staff to focus on higher-margin network-related professional services.
- ☒ Outsourcing, in the traditional "manage my mess for less" form, is characterized by sweating the assets. The outsourcer tries to squeeze as much as possible out of the equipment, which means there is little investment going into key productivity drivers such as unified communications. Moving to a model that leverages intelligence embedded in the network means that organizations can invest in growing revenue instead of sweating old networks with an eye on costs only.

## TRANSFORMATION OF NETWORK-RELATED PROFESSIONAL SERVICES MARKET

The market for network-related services is not as clearly defined as, for example, the network equipment market with its clear categories. IDC defines network life-cycle services into the following categories:

- ☒ **Network consulting and integration services.** Includes the activities and skills associated with planning for and building networks for the service provider as well as the enterprise.
- ☒ **Managed services.** The set of services and solutions provided by a third party on a multi-annual basis, at an agreed cost and against a set of agreed service levels. IDC's definitions cover both the service provider and the enterprise markets.
- ☒ **Maintenance services.** A type of activity taking place within a services contract on a multi-annual basis.

This market has in the past been seen as not being very strategic and core to overall ICT and business issues. On the vendor side, it has been characterized by being people intensive, which resulted in relatively low margins. IDC believes that this market is going through a dramatic transformation, driven by the complexity of the business and technology environment.

According to IDC research, the total addressable market for maintenance services surrounding core routing and switching equipment worldwide is \$17.5 billion. Of that figure Cisco holds the market leadership position with over 40% market share with maintaining or supporting 70% of the devices installed around the globe, either by Cisco Services or by its partners. As a result, networking suppliers are in a unique position to gather intelligence on installed devices, thereby creating a significant database of information about devices and networks.

The increasing number and various types of devices requesting access to the enterprise network will continue to proliferate. With these new devices will come greater complexity in meeting different user requirements and traffic patterns. The amount of data travelling over networks will continue to compound. And the ability to make sense of the ever increasing information will become a growing challenge for enterprise customers.

Increased intelligence built into devices, networks, operations, and the applications residing on the networks allows services firms to collect a continuing stream of intelligence about the health and activity of the devices and networks. Networking suppliers have been mining intelligence for years and can now leverage the information gleaned from millions of devices and thousands of networks to provide not only proactive intelligence, but now predictive and pre-emptive information about the networks. This information, combined with software analytics, allows IT managers and their partners to plan more effectively, and leverage networking investments more strategically.

According to IDC's recent worldwide network consulting and integration services forecast for 2011–2015, the NCIS market will reach \$22 billion in 2011 and grow at a CAGR of 9.6% over the forecast period to \$31.2 billion by 2015. Of that figure roughly 60% comprises integration services activities. These integration activities include manual services such as implementation, migration, security implementation, test and debug, and system configuration services. IDC believes moving through the forecast period that there will be a shift from many of these manual integration activities to more strategic consulting-led services. This migration will be driven by the use of automation and intelligence acquired from the devices and networks.

The automation-based model will have a significant impact on the professional services and outsourcing markets, with some markets fracturing. This transformation is, at a high level, characterized by taking people-intensive processes and distance out of the services model and replacing these elements with software. Driving this transformation from simple, reactive services to proactive, predictive, and even pre-emptive end-to-end services by leveraging vendor intellectual capital (ranging from databases of historical cases to live network probes) will be significant. The importance of intellectual capital will not be limited to maintenance services, but to all types of network-related services. Think about the importance of leveraging installed base intelligence when planning and implementing additions to the network: software-based configuration management services replacing human, manual processes delivered onsite.

Although the rate of adoption will vary, we believe the CxO, ICT directors, and other buyers of (maintenance) services should understand that this new wave of services that leverages the intelligence will have a profound effect on the business and the interaction with vendors. This means that organizations will have to approach investments in equipment and services in a different light and look at the end-to-end impact of the service experience. This could include the ability free up expensive engineering resources from a reactive, manual role and allow them to be involved with ICT strategy on issues such as increasing business agility by aligning business and IT (a leading concern for CIOs, according to IDC surveys).

## **SERVICES TRANSFORMATION WILL CHANGE THE WAY ENTERPRISES CONSUME SERVICES IN THE FUTURE**

- ☒ **Movement toward intelligent, proactive services.** Beyond cost cutting and the return to the growth agenda, all indicators point to the importance of the network within the enterprise. Virtualization efforts will continue, and so will datacenter consolidation. The number of devices and related application needs are also set to grow. Unified communications and convergence efforts will continue to gain pace among organizations. All these factors will put increasing pressure on the

enterprise network and will pose problems for the CIO. The complexity of the business and technology environment is forcing the services industry to transform.

- ☒ **Organizations will demand more from their suppliers.** We see the current model (based around selling product and associated services) shifting to a new type of model, where the supplier will become more involved in addressing business issues. It also means that a supplier will no longer be seen as a provider of equipment only, but as part of a wider ecosystem. This means that discussions will shift away from boxes to architecture, and how services tie into solutions.
  
- ☒ **Reconsider total cost of ownership.** Under the traditional equipment and services models, TCO was usually measured on a piece of equipment or on the network as a whole. For example, the life a router or switch would be valued at 60 months and the assets would then become obsolete or end of life, and organizations would either replace or upgrade as they examined their network strategy. A services firm or a networking supplier would help guide their enterprise customer (plan, design, implement, and optimize) through this process as part of their service offer. As the equipment and services worlds converge toward architecture-based solutions, this approach will change, especially if the intellectual capital and associated services based on it are taken into consideration. This happens, for example, when a solution with intelligence imbedded allows an organization to spend less on services staff to do manual configuration management, but instead rely on the intellectual capital to do it via automation enabled by the intelligence in the equipment and architecture.
  
- ☒ **Partners will play an important role in the new services environment.** On one level, they need to be as close as possible to the equipment vendors in order to leverage their intellectual capital and wrap their services around that. On another level, the automation implicit in that device or network will lead to freeing up time of valuable services staff to focus on higher-margin network-related professional services. This means that partners will have to become even closer to key vendors, and we'll see an ecosystem approach becoming the norm.
  
- ☒ **Outsourcing will change.** Outsourcing, in the traditional "manage my mess for less" form, is characterized by sweating the assets. The outsourcer tries to squeeze as much as possible out of the equipment, which means that there is little investment going into key productivity drivers such as unified communications. Unified communications and video will drive the increasing use of data on the network and add to network complexity. This means that organizations will look closely at selective out-tasking. Good targets could be new technologies where utilization is still difficult to forecast (e.g., telepresence), areas where there is a long ramp-up, or high cost to train internal resources.

## FUTURE IMPACT

IDC believes that the services transformation outlined above will impact organizations on several levels:

- ☒ **Automation as a service will become a viable option for IT managers and partners.** This will begin to remove people from time-intensive manual tasks, thereby allowing IT departments and services organizations to leverage resources more strategically. It could also impact the way organizations react to the higher levels of network intelligence that become available to them: there will be a significant increase in new opportunities around inventory and configuration management, for example.
- ☒ **Allocation of resources.** This means a shift to strategic engagements around aligning ICT and business initiatives. ICT staff (or services purchased from external parties) can focus on issues such as increased collaboration, which will be one of the key drivers of business growth over the next five years.
- ☒ **Retraining of resources.** IDC believes this shift in resources will redeploy technical staff from traditional manual tasks to more consulting-based activities. This change in business activities within services firms will lead many services firms to retrain staff to adjust to their new job functions. Services firms will need to examine the way they hire and deploy resources to manage this change effectively.
- ☒ **Services expectation will change because of a proactive experience.** Today, organizations are accustomed to buying network equipment, then wrap related services around the equipment (e.g., consulting, integration, or maintenance services) as they roll out the new infrastructure. Services leveraging the intelligence locked in the architecture and solution will be much more locked into the overall solution. At the same time, the value of such an approach will place strain on holy cows in the ICT space, for example outsourcing, as outlined above.

## CISCO SMART SERVICES EVOLUTION

The ability for suppliers to pull intelligence from their devices and networks has been a technology that has been available for some time now, primarily as an outgrowth from their own support and maintenance service offers. Adding software analytics to this intelligence, and delivering this information in a meaningful and actionable way, will provide tremendous value to partners and their customers.

Cisco has more than 25 years of networking expertise, with inarguably one of the world's largest installed bases of devices and networks around the globe, roughly 70%, in which Cisco has had the opportunity to collect massive amounts of historical and real-time customer data. Some staggering facts include 50 million+ devices installed, 6 million annual customer interactions, and 1 million+ online interactions. Cisco has coupled this information with business analytics software, its own intellectual capital, as well as newly developed and acquired resources, and can now provide not only proactive information but predictive and pre-emptive action for network devices, operations, and applications residing on the networks. This type of intelligence along with automation can help solve network challenges and increase innovation by leveraging software versus people.

Rooted with a long history of support and maintenance services Cisco has evolved its services offer, Smart Services, over time to add increased intelligence and value to its customers' devices and networks. This has been the evolution of the Cisco Smart Services strategy, building on traditional technical services to provide proactive and predictive capabilities across technical, advanced, and advisory service offers.

Cisco's Smart Services rests on four key pillars:

- ☒ Leveraging automation and intelligence within devices and networks
- ☒ Analyzing and correlating real-time customer data, coupled with historical databases
- ☒ Wrapping Cisco's intellectual capital around mined data in a meaningful and actionable way
- ☒ Providing partners with the ability to leverage Cisco's Smart Services in a way that benefits their business and provides value to their customers

IDC believes that leveraging software and automation will be a disruptor to service delivery as we know it. Over time, IDC believes that there will be a transition away from time- and people-intensive service activities such as migration services, implementation services, and other manual tasks that will be able to be delivered and managed by using software and automation. This transition will be driven by increasingly complex networks and the need for IT managers as well as services firms to swiftly and efficiently manage network assets.

The ability to manage networks efficiently by utilizing services proactively and elastically can free up expensive talent. IT resources may then be redeployed to strategic and innovative activities, and thereby maximize investments made in the network architectures. IDC believes this transformation in the services landscape has begun with services firms examining the way they hire sales and technical talent to meet the growing needs of their customer base. IDC believes Cisco Services to be a leader with this initiative and other vendors will follow suit.

The transformation of service delivery will have a significant impact on the outsourcing market. Outsourcing is based on the premise of leveraging outsourced fixed assets to deliver designated networking services. This may answer an opex requirement for many enterprises, but strategically it may impede an enterprise's ability to innovate if they are locked into an aging infrastructure that is shared with other enterprises. Moving forward this model will be replaced by selective "out-tasking" around issues such as configuration management among other solutions that will be suitable for more specific network infrastructures.

The evolution of Smart Services will be a disruptor to the way products and services will be purchased in the future. Cisco will be providing a tighter linkage or a fusion of the services that are embedded within the devices to allow enterprises and their partners to work more proactively with their network and thereby increase the innovation within their networks. This will be a paradigm shift away from the traditional consumption model of product *plus* service. The new model will become product *bundled with* service. As a result, IDC believes that enterprises and their partners will need to rethink the way they purchase networking equipment in the future, not just as a collection of devices that perform a task, but with a more holistic view of the network that will allow enterprises to utilize their networks as a competitive, innovative business asset.

## **CONCLUSION**

Network-related professional services are going through a massive transformation driven by the complexity of the business and technology environment. IDC sees a move from simple, reactive services to proactive, end-to-end [maintenance] services that leverage vendor intellectual capital (ranging from databases of historical cases to live network probes). However, the importance of intellectual capital will not be limited to maintenance services, but to all types of network-related services.

We believe the CxO level, ICT directors, and other buyers of services understand that this new wave of services that leverages the intelligence will have a profound effect on the business and the interaction with vendors. Partners will play an important role, not only by wrapping their services around a vendor's portfolio, but at the same time freeing up the time of their tactical staff to focus on higher-margin network-related professional services.

Finally, we anticipate major changes in the outsourcing market. Outsourcing, in the traditional "manage my mess for less" form, is characterized by sweating the assets. The outsourcer tries to squeeze as much as possible out of the equipment, which means that there is little investment going into key productivity drivers such as unified communications. Unified communications and video will drive the increasing use of data on the network and add to network complexity, again underlining the importance of an approach based on network intelligence. Moving to a model that leverages architectures and embedded intelligence within the network means that organizations can focus and invest in growing revenue.

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